

Title of the Invention

PROTECTIVE GARMENT WITH CARD DISPLAYING OR RECORDING DATA UNIQUE TO AUTHORIZED WEARER AND READABLE THROUGH GARMENT POCKET WINDOW

5 Technical Field of the Invention

This invention pertains to a protective garment, which is intended to be worn by a wearer, such as a firefighter, an emergency worker, a police officer, or a military person, who is authorized to pass through a security perimeter. This invention contemplates that the protective garment comprises a card, which is
10 disposed in a pocket defining a window and which displays or records data readable through the window and unique to the authorized wearer.

Background of the Invention

Commonly, a firefighter carries an identifying card, which may display bar code data identifying the firefighter and which may display a photograph of the
15 firefighter. As exemplified in United States Patents No. 5,596,652 and No. 6,029,889, the disclosures of which are incorporated herein by reference, it is known for said data to be electronically scanned and to be then used to track firefighters arriving at a firefighting site, entering the firefighting site, and leaving the firefighting site.

20 As a matter of related interest, United States Patent No. 5,572,741 discloses, on a firefighter's garment, a label bearing warnings, washing information, or other information. As stitched in place, the label is covered by a transparent, protective layer of a heat resistant, abrasion resistant, substantially waterproof material, which is stitched in place, all the way around the label. The material may be a

biaxially oriented, copolymer film, such as KAPTON film manufactured by E.I. DuPont de Nemours and Company of Wilmington, Delaware.

Historically, perimeter security has been needed at military bases and other military sites. Terrorist activities on September 11, 2001, in the United States and other incidents have highlighted that perimeter security may be also needed at firefighting sites and other sites, particularly where numerous firefighters, emergency workers, and police officers are gathered, many of whom may not be personally acquainted with one another.

Summary of the Invention

This invention provides a protective garment, which is intended to be only worn by a wearer who is authorized to pass through a security perimeter. The protective garment comprises a pocket, which defines a window, and a flap, which is movable between a position wherein the flap covers the window and positions wherein the flap does not cover the window. Preferably, the protective garment further comprises means, such as a hook-and-loop fastener, for attaching the flap detachably in the position wherein the flap covers the window.

This invention contemplates that the protective garment further comprises a card, which is disposed in the pocket. The card displays or records data, which are readable through the window by a human, by an electronic reader, or by both, and which are unique to the authorized wearer of the protective garment. The data may comprise symbolic data, such as bar code data, which identifies the authorized wearer, and a photograph of the authorized wearer of the protective garment.

As read by an electronic reader, the data may be used for perimeter security, by being compared to a database of authorized wearers, via a computer receiving

the data from the electronic reader. Additionally, the same data may be used for any similar or dissimilar purpose disclosed in United States Patents No. 5,596,652 and No. 6,029,889, *supra*. When the flap covers the window, the flap protects the data against becoming unreadable because of foreign matter, such as soot, or because of surface abrasion.

Brief Description of the Drawings

Figure 1 is a front, fragmentary, perspective view of a firefighter wearing a protective garment embodying this invention. Figure 2 is an enlarged detail taken from a region indicated in Figure 1. As illustrated in Figures 1 and 2, a flap of the protective garment is raised and a card is disposed in a pocket defining a window, through which data displayed by the card are visible. Figure 3, on a larger scale, is a further enlarged detail taken from a slightly different vantage and illustrating the card as being inserted into or having been removed from the pocket.

Detailed Description of the Preferred Embodiment

As illustrated, a protective garment 10 for a firefighter comprises an outer shell 20, which has an outer layer 22, a generally rectangular pocket 30, which defines a generally rectangular window 40 and which is provided by a fabric panel 32 sewn to the outer layer 22 of the outer shell 20, along a bottom margin 34 of the fabric panel 32 and along two lateral margins 36 of the fabric panel 32 but not along a top margin 38 of the fabric panel 32, and a generally rectangular flap 50, which is sewn to the outer layer 22 of the outer shell 20, along one edge 52 of the flap 50, above the top margin 38 of the fabric panel 32.

Preferably, as illustrated, the fabric panel 32 defining the pocket 30 is sewn on a chest portion of the outer layer of the outer shell 20. Alternatively, the fabric panel 32 defining the pocket 30 is sewn on another portion thereof, such as on an

arm portion. The outer layer 22 of the outer shell 20 is made from any fabric used heretofore for outer layers of outer shells of protective garments for firefighters and the fabric panel 32 and the flap 50 are made from the same fabric or from another suitable material.

5 Because the fabric panel 32 is not sewn to the outer layer 22 of the outer shell 20 along the top margin 38, the top margin 38 of the fabric panel 32 remains detached from the outer layer 22 of the outer shell 20. The flap 50 is movable between a window-covering position wherein the flap 50 overlies the margins 32, 34, 26, 38, so as to cover the window 40, and other positions wherein the flap 50
10 does not cover the window 40. The flap 50 is illustrated in one of the positions wherein the flap 50 does not cover the window 40.

 As illustrated, a hook-and-loop fastener 60 is provided for attaching the flap 50 detachably in the window-covering position. The hook-and-loop fastener 60 comprises loop-faced tapes 62, which are sewn to the fabric panel 32 along its
15 margins 32, 34, and hook-faced tapes 64, which are sewn to the flap 60 along flap margins 52, 54, where the flap 50 overlies the margins 32, 34, when the flap 50 is in the window-covering position. Other detachable attaching means, such as a mechanical zipper or a series of snap fasteners, may be alternatively provided for attaching the flap 50 detachably in the window-covering position.

20 As illustrated, a card 70 displays, on its anterior surface, alphanumeric data, which includes the name, departmental rank, and departmental affiliation of an authorized wearer of the protective garment 10, symbolic data, such as bar code data, which identify the authorized wearer and which can be electronically read by an electronic reader, such as a bar code scanner if the card 70 displays bar code
25 data, and a photograph of the authorized wearer. The card 70 is disposed in the

pocket 30 so that the data displayed by the card 70, on its anterior surface, are visible through the window 40. Moreover, the card 70 may display other data, such as a medical history of the authorized wearer, on its posterior surface. Advantageously, the card 70 is removable from the pocket 30, as for laundering of
5 the protective garment 10.

Along with or instead of the data described in the preceding paragraph, the card 70 may record, via a magnetic strip or a microchip or otherwise, data that identify the authorized wearer and that are readable via an electronic reader, such as an electronic scanner.

10 When the flap 50 covers the window 40, the flap 50 protects the data displayed on the anterior surface of the card 70 against becoming illegible because of foreign matter, such as soot, or because of surface abrasion. Optionally, for further protection thereagainst a separate, transparent, protective sheet is disposed in the pocket 30, so as to cover the anterior surface of the card 70. Optionally, for
15 further protection thereagainst, the card 70 is made from cardboard but is laminated between two transparent, protective sheets.

As read by an electronic reader, the data displayed on the anterior surface of the card 70 may be used for perimeter security, by being compared to a database of authorized wearers, via a computer receiving the data from the electronic reader.
20 Additionally, the same data may be used for any similar or dissimilar purpose disclosed in United States Patents No. 5,596,652 and No. 6,029,889, *supra*.